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EXAMINER

BADERMAN, SCOTT T

ART UNIT PAPER NUMBER

2113

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Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

09/881,007

Applicant(s)

GURUMOORTHY ET AL.

Examiner

Scott T Baderman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-31 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 08 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: On page 2, paragraph 9, "Figure 4" should be "Figures 4A-B". Appropriate correction is required.

### ***Claim Objections***

2. Claim 27 is objected to because of the following informalities: In lines 4-5, "the firmware interface" should be "a firmware interface". Appropriate correction is required.
3. Claim 31 is objected to because of the following informalities: This "apparatus" claim is dependent on claim 2, which is a "method" claim. In order to apply prior art, it is being interpreted as being dependent on claim 27. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

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do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 8-12, 15-19 and 22-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Gold et al. (2002/0053044).

As in claims 8, 15 and 22, Gold discloses a system (which includes a data (host) processor, one or more peripheral devices (disk drive) and a data bus (inherent) (paragraphs 14, 15 and 55)) and computer implemented method (via instructions) for attempting to launch an operating system on a processing system, detecting an unsuccessful attempt to launch the operating system (fails to boot), and initiating a system reset of the processing system in response to detecting the unsuccessful attempt to launch the operating system (page 1, paragraphs 5-7).

As in claims 9, 16 and 23, Gold discloses setting a timer and detecting an unsuccessful attempt to launch the operating system by detecting an expiration of the timer (i.e., Gold discloses watchdog timers which reset the hardware if the operating system fails to “clear” the timers, wherein the operating system would fail to clear the timers if it fails to boot) (page 1, paragraphs 5-7).

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As in claims 10, 17 and 24, Gold discloses detecting a successful launch of the operating system and disabling (clearing) the timer in response to detecting the successful launch of the operating system (i.e., Gold discloses that the hardware will only be reset if the operating system fails to clear the timers due to the operating system failure (e.g., fails to boot), which implies that if the operating system does not fail, the timers will be cleared) (page 1, paragraphs 5-7).

As in claims 11, 18 and 25, Gold discloses re-attempting to launch the operating system on the processing system in response to initiating a system reset of the processing system (i.e., Gold discloses that a second operating system will only be used if the primary operating system fails to boot “twice”) (page 1, paragraph 7).

As in claims 12, 19 and 26, Gold discloses attempting to launch a different operating system on the processing system in response to a system reset of the processing system (i.e., Gold discloses that if the primary operating system fails to boot twice, then a secondary operating system will be booted) (page 1, paragraph 7).

6. Claims 8-11, 15-18 and 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Suffin (6,691,225).

As in claims 8, 15 and 22, Suffin discloses a system (which includes a data (host) processor, one or more peripheral devices and a data bus (Figure 1)) and computer implemented method (via instructions) for attempting to launch an operating system (included in the boot

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process) on a processing system, detecting an unsuccessful attempt to launch the operating system, and initiating a system reset (i.e., selects a new boot pair from a boot list via a reset) of the processing system in response to detecting the unsuccessful attempt to launch the operating system (column 7: lines 20-53).

As in claims 9, 16 and 23, Suffin discloses setting a timer and detecting an unsuccessful attempt to launch the operating system by detecting an expiration of the timer (i.e., by not receiving a heartbeat signal in a predetermined period of time) (column 7: lines 20-53).

As in claims 10, 17 and 24, Suffin discloses detecting a successful launch of the operating system and disabling the timer in response to detecting the successful launch of the operating system (i.e., if the heartbeat signal is received in a predetermined period of time, the timer determining the predetermined period of time is reset or disabled) (column 7: lines 20-53).

As in claims 11, 18 and 25, Suffin discloses re-attempting to launch the operating system (via a new boot pair) on the processing system in response to initiating a system reset of the processing system (column 7: lines 20-53).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7, 13-14, 20-21 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gold et al. in view of Intel's "Extensible Firmware Interface Specification" (hereinafter "Intel").

As in claims 1 and 27, Gold discloses a method and system for attempting to launch an operating system on a processing system, detecting an unsuccessful attempt to launch the operating system (fails to boot), and initiating a system reset of the processing system in response to detecting the unsuccessful attempt to launch the operating system (page 1, paragraphs 5-7). However, Gold does not specifically disclose launching a firmware interface on the processing system, wherein the firmware interface includes logic that, once executed, performs the operations of launching, detecting and initiating above. Intel discloses a firmware interface that resides between an operating system and the platform firmware (page 1).

It would have been obvious to a person skilled in the art at the time the invention was made to include launching a firmware interface on the processing system taught by Gold above, wherein the firmware interface includes logic that, once executed, performs the operations of launching, detecting and initiating above. This would have been obvious because Intel clearly teaches that the firmware interface contains information that provides a standard environment for booting an operating system (page 1). Further, Intel teaches that by using the firmware interface, an operating system will be able to boot on a variety of system designs without further platform or operating system customization (page 1). A person skilled in the art would have understood

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the benefits of including a firmware interface, as taught by Intel, and would have been motivated to implement such an interface into the method and system taught by Gold above based on those benefits.

As in claims 2 and 28, Gold discloses setting a timer and detecting an unsuccessful attempt to launch the operating system by detecting an expiration of the timer (i.e., Gold discloses watchdog timers which reset the hardware if the operating system fails to “clear” the timers, wherein the operating system would fail to clear the timers if it fails to boot) (page 1, paragraphs 5-7).

As in claims 3 and 29, Gold discloses detecting a successful launch of the operating system and disabling (clearing) the timer in response to detecting the successful launch of the operating system (i.e., Gold discloses that the hardware will only be reset if the operating system fails to clear the timers due to the operating system failure (e.g., fails to boot), which implies that if the operating system does not fail, the timers will be cleared) (page 1, paragraphs 5-7).

As in claims 4 and 30, Gold discloses re-attempting to launch the operating system on the processing system in response to initiating a system reset of the processing system (i.e., Gold discloses that a second operating system will only be used if the primary operating system fails to boot “twice”) (page 1, paragraph 7).



As in claims 5 and 31, Gold discloses attempting to launch a different operating system on the processing system in response to a system reset of the processing system (i.e., Gold discloses that if the primary operating system fails to boot twice, then a secondary operating system will be booted) (page 1, paragraph 7).

As in claim 6, Gold discloses performing the operations above in response to an execution of one or more BIOS routines (page 1, paragraph 5).

As in claim 7, Intel discloses launching a boot manager in response to the execution of one or more BIOS routines (implied) and launching an operating system loader from the boot manager (page 317).

As in claims 13 and 20, Gold discloses performing the operations above in response to an execution of one or more BIOS routines (page 1, paragraph 5). However, Gold does not specifically disclose launching a firmware interface. Intel discloses a firmware interface that resides between an operating system and the platform firmware (page 1).

It would have been obvious to a person skilled in the art at the time the invention was made to include launching a firmware interface on the processing system taught by Gold above. This would have been obvious because Intel clearly teaches that the firmware interface contains information that provides a standard environment for booting an operating system (page 1). Further, Intel teaches that by using the firmware interface, an operating system will be able to boot on a variety of system designs without further platform or operating system customization

(page 1). A person skilled in the art would have understood the benefits of including a firmware interface, as taught by Intel, and would have been motivated to implement such an interface into the system taught by Gold above based on those benefits.

As in claims 14 and 21, Intel discloses launching a boot manager in response to the execution of one or more BIOS routines (implied) and launching an operating system loader from the boot manager (page 317).

9. Claims 1-4, 6-7, 13-14, 20-21 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suffin in view of Intel's "Extensible Firmware Interface Specification" (hereinafter "Intel").

As in claims 1 and 27, Suffin discloses a method and system for attempting to launch an operating system (included in the boot process) on a processing system, detecting an unsuccessful attempt to launch the operating system, and initiating a system reset (i.e., selects a new boot pair from a boot list via a reset) of the processing system in response to detecting the unsuccessful attempt to launch the operating system (column 7: lines 20-53). However, Suffin does not specifically disclose launching a firmware interface on the processing system, wherein the firmware interface includes logic that, once executed, performs the operations of launching, detecting and initiating above. Intel discloses a firmware interface that resides between an operating system and the platform firmware (page 1).

It would have been obvious to a person skilled in the art at the time the invention was made to include launching a firmware interface on the processing system taught by Suffin above, wherein the firmware interface includes logic that, once executed, performs the operations of launching, detecting and initiating above. This would have been obvious because Intel clearly teaches that the firmware interface contains information that provides a standard environment for booting an operating system (page 1). Further, Intel teaches that by using the firmware interface, an operating system will be able to boot on a variety of system designs without further platform or operating system customization (page 1). A person skilled in the art would have understood the benefits of including a firmware interface, as taught by Intel, and would have been motivated to implement such an interface into the method and system taught by Suffin above based on those benefits.

As in claims 2 and 28, Suffin discloses setting a timer and detecting an unsuccessful attempt to launch the operating system by detecting an expiration of the timer (i.e., by not receiving a heartbeat signal in a predetermined period of time) (column 7: lines 20-53).

As in claims 3 and 29, Suffin discloses detecting a successful launch of the operating system and disabling the timer in response to detecting the successful launch of the operating system (i.e., if the heartbeat signal is received in a predetermined period of time, the timer determining the predetermined period of time is reset or disabled) (column 7: lines 20-53).

As in claims 4 and 30, Suffin discloses re-attempting to launch the operating system (via a new boot pair) on the processing system in response to initiating a system reset of the processing system (column 7: lines 20-53).

As in claim 6, Suffin discloses performing the operations above in response to an execution of one or more BIOS routines (column 7: lines 20-53).

As in claim 7, Intel discloses launching a boot manager in response to the execution of one or more BIOS routines (implied) and launching an operating system loader from the boot manager (page 317).

As in claims 13 and 20, Suffin discloses performing the operations above in response to an execution of one or more BIOS routines (column 7: lines 20-53). However, Suffin does not specifically disclose launching a firmware interface. Intel discloses a firmware interface that resides between an operating system and the platform firmware (page 1).

It would have been obvious to a person skilled in the art at the time the invention was made to include launching a firmware interface on the processing system taught by Suffin above. This would have been obvious because Intel clearly teaches that the firmware interface contains information that provides a standard environment for booting an operating system (page 1). Further, Intel teaches that by using the firmware interface, an operating system will be able to boot on a variety of system designs without further platform or operating system customization (page 1). A person skilled in the art would have understood the benefits of including a firmware

interface, as taught by Intel, and would have been motivated to implement such an interface into the system taught by Suffin above based on those benefits.

As in claims 14 and 21, Intel discloses launching a boot manager in response to the execution of one or more BIOS routines (implied) and launching an operating system loader from the boot manager (page 317).

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott T Baderman whose telephone number is (703) 305-4644. The examiner can normally be reached on Monday-Friday, 6:45 AM-4:15 PM, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Scott T Baderman  
Primary Examiner  
Art Unit 2113

STB